April 13, 1950.

Dr. Evelyn M. Witkin,
Dept. Genetics,
Carnegie Institution,
Cold Spring Harbor, L.I., N.Y.

Dear Evelyn:

In reference to reversion of "polyauxotrophs": about 6 months ago, I was surprised to find prototrophs in platings of W-1189, a threonine-histidineless double mutant from a coli other than K-12. This seems to be doing the same sort of thing as your B/r culture. I don't think it's some sort of queer serial selection, because platings on threonine or on histidine agar also give prototrophs. along with "monoauxotroph" reversions. I suspect that it's a suppressor, but can't see how to handle it except in K-12. I've never noticed such behavior in K-12 mutants, as yet, but I do have some with the same nutritional requirements, histidine and serine/glycine as your B/r, which might be a good bet to look for the double "reversions". Such double reversions could be crossed with wild type K-12 on complete medium, using drug-resistance, to determine whther the "reversions" were back-mutants or suppressors. I sent W-826 to Bernie Davis a while ago: if you're interested to test it, why don't you call him up to send it, or else drop me a line. Ryan has W-1189 and may have some more dope on it. It certainly would be a worthwhile problem, if properly attacked. If W-826 doesn't work, Bernie has any number of other double mutants of K-12 (mine and theirs) which might give you a lead.

I certainly don't think that one can assume that any "reversion" is a back-mutation without genetic tests. Esther has run into suppressors rather frequently in her work.

An advisory board to MGB might be a good idea, if only to save you embarrassment in a difficult decision. On the other hand, this may be getting a bit too formal. Some sort of policy committee to set up a few rules, which would then be left to individual consciences to follow might be better, and it really wouldn't have to be too representative: I'd be happy to leave it to the judgment of the New York group.

Yours sincerely,

Joshua Lederberg